**APPENDIX**

**Figure S1.** PRISMA Flow Diagram

Studies included in narrative synthesis
(n = 27)

Records screened after duplicates removed
(n = 4,049)

Full-text articles assessed for eligibility
(n = 234)

Records excluded
(n = 3,815)

Additional records identified through other sources
(n = 17)

## Identification

## Eligibility

## Included

## Screening

Records identified through database searching
(n = 6,123)

Full-text articles excluded
(n = 122)

* 111, wrong study design
* 8, sample size <100 participants
* 1, wrong assay type
* 1, wrong outcome
* 1, wrong patient population

Ongoing studies (n=85)

**Table S1.** Database Search Terms.

| **Mesh** *Indicates subject heading* | **Supplementary Concept***Indicates subject heading* | **TW***Indicates Keyword* |
| --- | --- | --- |
| Coronavirus | COVID-19 | COVID |
| Coronavirus infections | Severe acute respiratory syndrome coronavirus 2 | COVID19 |
| Prevalence |  | Coronavirus |
| Cross-sectional studies | Corona virus |
| Seroepidemiologic studies | nCOV |
| Population surveillance | 2019nCOV |
| Animals NOT human | SARS COV |
|  | SARSCOV |
| SARS2 |
| Severe acute respiratory syndrome cov |
| Severe acute respiratory syndrome cov2 |
| Seroprevalence |
| Prevalence |
| Seropositivity |
| Sero postivity |
| Serosurvey |
| Sero epidemiology |
| Seroepidemiology |
| Serosurveillance |
| Surveillance |
| Serology |
| Antibody |
| Blood OR Serum OR Plasma NOT Transfusion |

**Table S2.** Ongoing Studies Overview.

| **Study Name** | **Study ID** | **Start Date** | **End Date** | **Country** | **Estimated Sample Size** |
| --- | --- | --- | --- | --- | --- |
| Antibody Seroprevalence and Rate of Asymptomatic Infections With SARS-CoV-2 in Austrian Hospital Personnel | NCT04354779 | May-20 | Nov-20 | Austria | 4,000 |
| CoVid-19 - Infection and Antibody Formation in the Viennese Population | NCT04346264 | Apr-20 | Sep-20 | Austria | 5,500 |
| Study to Determine the Immunization Status Among Nephrological Health Care Personnel Against SARS-CoV-2 in a Single Center Over the Course of 12 Months  | NCT04347694 | Apr-20 | Apr-20 | Austria | 400 |
| Study to Determine the Immunization Status Among Nephrological Health Care Personnel Against SARS-CoV-2 in a Single Center Over the Course of 12 Months During the Worldwide COVID-19 Pandemic | NCT04347694 | Apr-20 | Apr-20 | Austria | 400 |
| Serological Testing for COVID-19 (SARS-CoV-2) in ESKD  | NCT04378686 | Apr-20 | May-20 | Belgium | 500 |
| COVID-19 Among Healthcare Workers in Belgian Hospitals  | NCT04373889 | Apr-20 | Sep-20 | Belgium | 800 |
| Immune Response to Covid-19 in 300 Health Care Workers With Mild Symptoms | NCT04356586 | Apr-20 | Jul-20 | Belgium | 300 |
| Assessment of Seroprevalence and Incidence of SARS-CoV-2 Infection in Brazil | NCT04355338 | May-20 | May-20 | Brazil | 4,100 |
| Assessment of Seroprevalence and Incidence of SARS-CoV-2 Infection and COVID-19 in Brazil | NCT04355338 | May-20 | May-20 | Brazil | 4,100 |
| Clinical application value of multiple tests for novel coronavirus pneumonia (COVID-19) | ChiCTR2000031428\* | May-20 | Oct-20 | China | 500 |
| COVID-19: Herd Immunity Study in the Czech Republic  | NCT04401085 | Apr-20 | May-20 | Czech Republic | 27,000 |
| Antibody Response Against SARS-CoV-2 in Dialysis Patients During COVID-19 | NCT04367714 | Mar-20 | Dec-20 | Denmark | 300 |
| COVID-19: Investigation of Transmission and Immunisation Among Hospital Staff | NCT04346186 | Apr-20 | Aug-20 | Denmark | 30,000 |
| COVID-19 Surveillance of Patients and Healthcare Workers in a Hospital Department | NCT04356560 | Mar-20 | Dec-20 | Denmark | 300 |
| Reduction in COVID-19 Infection Using Surgical Facial Masks Outside the Healthcare System | NCT04337541 | Apr-20 | Jul-20 | Denmark | 6,000 |
| Risk Assessment of Healthcare Workers and Infection Control in University and COVID-19 Quarantine Hospitals | NCT04348214 | Apr-20 | Dec-20 | Egypt | 3,000 |
| Asymptomatic COVID-19 Infection Among Healthcare Workers  | NCT04354792 | May-20 | Jun-20 | Egypt | 500 |
| COVID-19 Staff Testing of Antibody Responses Study (Co-Stars)  | NCT04380896 | Apr-20 | Jul-20 | England | 1,000 |
| Validation of COVID-19 Tests  | NCT04404062 | Mar-20 | Aug-20 | England | 500 |
| Rapid Diagnostics, Antibody Testing and Host Response in Children With COVID-19 | NCT04347408 | May-20 | Dec-20 | England | 1,000 |
| COVID-19: Healthcare Worker Bioresource: Immune Protection and Pathogenesis in SARS-CoV-2 | NCT04318314 | Mar-20 | Dec-20 | England | 400 |
| Sero-epidemiological Survey of England in 2019/2020 | NCT04061382 | Oct-20 | Jun-20 | England | 3,500 |
| Study of SARS-CoV2 Virus (COVID-19) Seroprevalence in the Population of Creil Air Force Base (BA110) | NCT04389294 | May-20 | Feb-20 | France | 2,500 |
| Prevalence and Impact of SARS-COV-2 Infection in Pregnant Women, Fetuses and Newborns | NCT04355234 | Apr-20 | Aug-20 | France | 2,200 |
| Immunity and Infections in the Psychiatric Population  | NCT04381845 | May-20 | Jun-20 | France | 200 |
| Immunity Against SARS-CoV2 in Children and Their Parents  | NCT04355533 | Jun-20 | Sep-20 | France | 1,920 |
| Serology COVID-19 From the Cornwall Hospital Union  | NCT04363593 | May-20 | Nov-20 | France | 3,200 |
| Multicentre Observational Study on Management COVID 19 Positive Outpatients in a French Cluster | NCT04363099 | Mar-20 | Dec-20 | France | 1,000 |
| Prevalence of SARS -Cov2 Carriage in Asymptomatic and Mildly-symptomatic Children | NCT04318431 | Apr-20 | Jun-20 | France | 605 |
| Study of the SARS-COV-2 (COVID-19) Serological Profile of an Army Training Hospital Staff | NCT04387838 | May-20 | Jul-20 | France | 900 |
| Cohort of Patients With Inflammatory Bowel Disease During COVID-19 Pandemic | NCT04344249 | Apr-20 | Sep-20 | France | 850 |
| COVID-19 Study of the Serological Response Against the Severe Acute Respiratory Syndrome (SARS) Coronavirus 2 (CoV-2) Virus in 2 Types of Employees, Hospital and Non-hospital, at Institute Curie | NCT04369066 | Apr-20 | Jan-20 | France | 2,500 |
| Viral Excretion in Contact Subjects at High/Moderate Risk of Coronavirus 2019-nCoV Infection | NCT04259892 | Feb-20 | Feb-20 | France | 345 |
| Health, Perception, Practices, Relations and Social Inequalities in the General Population During the Covid-19 Crisis | NCT04392388 | May-20 | Dec-20 | France | 110,000 |
| Factors Associated With a Positive SARS-CoV-2 Serology in Contact Subjects at High/Moderate Risk of Coronavirus SARS-CoV-2 Infection (CoV-CONTACT-SERO) | NCT04322279 | Mar-20 | Jun-20 | France | 300 |
| Household Transmission Investigation Study for COVID-19 in French Guiana | NCT04328129 | Mar-20 | Mar-20 | France | 450 |
| Prevalence and Impact of COVID-19 Infection in Pregnant Women, Fetuses and Newborns | NCT04355234 | Apr-20 | Aug-20 | France | 2200 |
| COVID-19 Seroconversion Among Front Line Medical and Paramedical Staff in Emergency, Intensive Care Units and Infectious Disease Departments During the 2020 Epidemic | NCT04304690 | Mar-20 | Oct-20 | France | 1,000 |
| Sero-epidemiological Study of the SARS-CoV-2 Virus in France: Constitution of a Collection of Human Biological Samples  | NCT04325646 | Mar-20 | Feb-20 | France | 1,000 |
| Prevalence and Seroconversion of COVID-19 in Autoimmune Diseases in Europe  | NCT04397237 | May-20 | Dec-20 | France | 3,600 |
| Epidemiological Study of the Covid-19 Presto Test  | NCT04387968 | Jun-20 | Jan-20 | France | 700 |
| Prevalence of COVID-19 Infection Among HCW in a French University Hospital | NCT04371692 | Apr-20 | Sep-20 | France | 100 |
| Longitudinal Study of SARS-Cov2 Infection Among HCW in a French University Hospital | NCT04362267 | Apr-20 | Sep-20 | France | 150 |
| COVID 19-Caregivers IGg Seroconversion  | NCT04353323 | May-20 | Dec-20 | France | 130 |
| Barrier Measures to Limit Covid-19 Nosocomial Transmission: A Cross-sectional Evaluation | NCT04376944 | Apr-20 | Dec-20 | France | 300 |
| Predictive Immune Biomarkers for COVID-19 Pathogenesis  | NCT04385108 | May-20 | Dec-20 | France | 170 |
| Testing for COVID-19 Infection in Asymptomatic Persons  | NCT04345510 | Apr-20 | Dec-20 | Germany | 500 |
| Prospective molecular biological and serological examination for the detection of SARS-CoV-2 (COVID-19) in employees of a hospital of regular care in Germany | DRKS00021270\* | Apr-20 | NA | Germany | 900 |
| COVID-19 Contact Study - Immunoreaction after possible SARS-CoV-2 / COVID-19 contact | DRKS00021152\* | Apr-20 |  | Germany | 1,000 |
| Study on SARS-CoV-2-Serology (COVID-19) in Bremen's public sector | DRKS00021289 | Mar-20 |  | Germany | 100 |
| Screening for SARS-CoV-2-Infections and Monitoring of Serological Responses to SARS-CoV-2 in Healthcare Workers | NCT04370119 | Apr-20 | May-20 | Germany | 4,000 |
| Prevalence of COVID-19 in children aged 1-10 years in Baden-Wüttemberg | DRKS00021521\* | Apr-20 | NR | Germany | 2,000 |
| Delineate the prevalence, risk factors, temporal distribution and epidemiological characteristics of hidden novel coronavirus (2019-nCoV) infection in the community | ChiCTR2000031928\* | Apr-20 | Apr-20 | Hong Kong | 3,000 |
| Observational Study to Assess the Seroconversion Status of Health Care Workers and Suspected or Confirmed Cases of COVID-19 Patients  | NCT04368884 | Apr-20 | Jul-20 | India | 1,000 |
| Evaluating the Immune Response for COVID-19  | NCT04348422 | Apr-20 | Dec-20 | Israel | 1,000 |
| Clinical Performance of the VivaDiag ™ COVID-19 lgM IgG Rapid Test in Early Detecting the Infection of COVID-19 | NCT04316728 | Mar-20 | Nov-20 | Italy | 200 |
| Detection of Anti-COVID-19 Antibody Levels in an Hospital Population | NCT04387929 | May-20 | May-20 | Italy | 6,000 |
| Correlative Study on Cancer Patients and Healthcare Professionals Exposed to Infection by Severe Acute Respiratory Syndrome-Corona Virus-2 (SARS-Cov-2), COVID-19 Causative Agent | NCT04345315 | Mar-20 | Mar-20 | Italy | 500 |
| COvid-19 National Survey for Assessing VIral Spread by Nonaffected CarriErs (CON-VINCE)  | NCT04379297 | Apr-20 | Dec-20 | Luxembourg | 1,800 |
| Control of COVID-19 in hospitals  | NL8528\* | Apr-20 | Aug-20 | Netherlands | 2,000 |
| Risk Factors for Community- and Workplace Transmission of COVID-19 | NCT04320732 | Mar-20 | Mar-20 | Norway | 50,000 |
| Slovenian National COVID-19 Prevalence Study  | NCT04376996 | Apr-20 | Dec-20 | Slovenia | 3000 |
| Contagiousness and Immunogenicity Status of COVID-19 in Asymptomatic Population (COVID-19 CONDITION) | NCT04389658 | May-20 | Aug-20 | Spain | 1,000 |
| SPREAD AND COURSE OF COVID-19 INFECTIONS  | NCT04377724 | Apr-20 | Jun-20 | Switzerland | 3,000 |
| Can the Ava fertility tracker device detect early signs of COVID-19? | ISRCTN51255782\* | Mar-20 | Dec-20 | Switzerland | 5,000 |
| A Systems Approach to Predict the Outcome of SARS-CoV-2 in the Population of a City | NCT04351503 | Apr-20 | Apr-20 | Switzerland | 10,000 |
| Understanding COVID-19  | NCT04329546 | Mar-20 | Mar-20 | Switzerland | 250 |
| Assessment of Covid-19 Infection Rates in Healthcare Workers Using a Desynchronization Strategy | NCT04333862 | Mar-20 | Dec-20 | Switzerland | 500 |
| SARS-COV2 Pandemic Serosurvey and Blood Sampling | NCT04334954 | Jun-20 | Mar-20 | USA | 15,000 |
| Coronavirus Disease 2019 (COVID-19) Seroprevalence and Mental Health Burden Among Healthcare Workers  | NCT04367857 | Apr-20 | Oct-20 | USA | 1,000 |
| ANTIBODY BASED TESTS FOR SARSCoV-2 COVID-19) - Evaluation of Patients and Healthcare Providers in the Confines of Healthcare Settings | NCT04352764 | Mar-20 | Jan-20 | USA | 5,000 |
| HSS Covid-19 Antibody Serology Among Surgeons & Anesthesiologists | NCT04389294 | May-20 | Oct-20 | USA | 300 |
| St. Jude Tracking of Viral and Host Factors Associated With COVID-19 | NCT04362995 | Apr-20 | Mar-20 | USA | 1,517 |
| Beaumont Health Large-scale Automated Serologic Testing for COVID-19 | NCT04349202 | Apr-20 | Jun-20 | USA | 50,000 |
| Seroprevalence of SARS CoV 2 Antibodies in Previously Undiagnosed Healthcare Workers | NCT04383587 | May-20 | Jun-20 | USA | 300 |
| Atrium COVID-19 Syndromic and Serologic Surveillance  | NCT04361123 | Apr-20 | Dec-20 | USA | 450,000 |
| Surveillance of Individuals Following SARS-CoV-2 Exposure  | NCT04383444 | Jun-20 | Jun-20 | USA | 1,050 |
| COVID-19: Human Epidemiology and Response to SARS-CoV-2  | NCT04375761 | May-20 | Dec-20 | USA | 8,000 |
| Incidence of COVID-19 Test Conversion in Post-surgical Patients  | NCT04392323 | May-20 | Jul-20 | USA | 500 |
| Rutgers COVID-19 Cohort Study  | NCT04336215 | Apr-20 | Oct-20 | USA | 750 |
| COVID-19 Community Research Partnership | NCT04342884 | Apr-20 | Dec-20 | USA | 150,000 |
| ARMOR Study: COVID-19 Seroprevalence Among Healthcare Workers | NCT04367857 | Apr-20 | Oct-20 | USA | 1,000 |
| Rapid SARS-CoV-2 IgG Antibody Testing in High Risk Healthcare Workers | NCT04334876 | Apr-20 | Jan-20 | USA | 340 |
| Assessing the Safety of Pregnancy In the CoRonavirus (COVID-19) pandEmic | NCT04388605 | Apr-20 | Sep-20 | USA | 11,000 |
| ScreenNC, a Study to Determine the Number of Asymptomatic Individuals Who Have Antibodies to the Virus That Causes COVID-19 | NCT04367740 | Apr-20 | Apr-20 | USA | 10,000 |

\*=study not registered in clinicaltrials.gov, ICTRP ID provided, NR=not reported

**Table S3.** Summary of Ongoing Studies.

| **Characteristic** | **Number of Studies** |
| --- | --- |
| Study Design |
| Case-control | 2 |
| Cohort | 64 |
| Cross-sectional | 18 |
| Cross-sectional, with a subset enrolling in a cohort study | 1 |
| Sampling Frame |
| Representative sample of the general population | 9 |
| Non-representative sample of the general population | 12 |
| Patients without COVID-19 | 8 |
| Healthcare workers | 33 |
| Close contacts of patients with COVID-19 | 2 |
| Patients with COVID-19 and close contact of patients with COVID-19 | 5 |
| Healthcare workers and patients without COVID-19 | 5 |
| Healthcare workers and close contacts of patients with COVID-19 | 1 |
| Patients without COVID-19 and a representative sample of the general population | 1 |
| Patients with COVID-19 and a representative sample of the general population | 2 |
| Patients with COVID-19 and a non-representative sample of the general population | 1 |
| Patients with COVID-19 and patients without COVID-19 | 1 |
| Healthcare workers, non-representative sample of the general population, and close contacts of patients with COVID-19 | 1 |
| Healthcare workers, patients without COVID-19, and close contacts of patients with COVID-19 | 2 |
| Healthcare workers, patients without COVID-19, and patients with COVID-19 | 1 |
| Healthcare workers, patients without COVID-19, patients with COVID-19, and a non-representative sample of the general population | 1 |
| Region |
| Asia | 4 |
| Africa | 2 |
| Europe | 60 |
| North America | 17 |
| South America | 2 |